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10/547,191	06/28/2006	Guntram Scheible	0070996-000044	9175
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EXAMINER SALZMAN, KOURTNEY R				
ART UNIT 1795		PAPER NUMBER		
NOTIFICATION DATE 05/25/2010		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/547,191

Applicant(s)

SCHEIBLE ET AL.

Examiner

KOURTNEY R. SALZMAN

Art Unit

1795

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 March 2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/CD)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Summary

1. The amendment filed March 29, 2010 has been entered and fully considered.
2. Claims 1, 2 and 6-11 are currently amended.
3. Claims 1-11 are currently pending and have been fully considered.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what is meant in the first and second lines of the second limitation of claim 1 where the claim has been amended to recite "a transducer face for facing the process" and "a transducer face for facing away from the process". The addition of the word "for" makes the claim unclear as the face is not there to serve the purpose of facing or facing away but it rather is present there and happens to face or face away. If there is a different intended meaning, it isn't clear in the specification or the arguments and the examiner would appreciate any information regarding the intention and meaning of this wording.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 6 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by ABB Patent GmbH or ABB et al (DE 201 07 112 U1), as supplied in the IDS dated August 29, 2005, as discerned through a machine translation.

Regarding claims 1 and 6, ABB et al teaches a field device 1 comprising a housing 1 and pipeline 2 carrying process media (as indicated by the arrow) to thermoelectric transducer 14 with wireless communication interface 12 and 121. The transducer comprises a face parallel to the pipe on the bottom of the transducer which faces the process while another face of the transducer which also runs parallel to the pipe but on the top of the transducer faces away from the process. Furthermore, piece 141 of the thermoelectric converter is located outside of the pipeline. The broadest reasonable interpretation of outside the pipeline includes at least part of the converter (or in this case, most) of the converter to be outside the pipeline. The field device also has a face toward the process (the side running parallel to the pipe at the pipe interface) and with the other three sides of the dashed lines facing away from the process. Regarding the newest limitation of claim 1 requiring the transducer to power the field device, the same structural requirements are provided in reference ABB et al as are required by the claim limitations of the instant application. Inherently, since the same structure is present, the same operation is possible. Moreover, the use of the power is irrelevant to the structure of the apparatus itself, as in claims 1 and

2, as it is not a structural feature which would carry weight or distinguish ABB et al from the instant application structure. Regarding the newest limitation of claim 6 requiring the transducer to power the field device, since the power is generated in the transducer and the transducer is included in the field device, power is supplied to the field device.

Regarding claims 2 and 7, the thermoelectric converter is described in the specification to utilize the temperature difference between point 141 and 142, regardless of the site where the colder or hotter temperature is occurring. This is also the inherent operation of thermoelectric converters.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

9. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by BOCKO et al (US PG PUB 2002/0145538 A1).

BOCKO et al teaches a field device comprising a housing (limitations a and d of claim 1 of BOCKO et al), process media to create heat in base 22, and wireless data link 120 of figure 12. Figure 12 of BOCKO et al is shown below to identify the transducer faces facing away and toward the process.

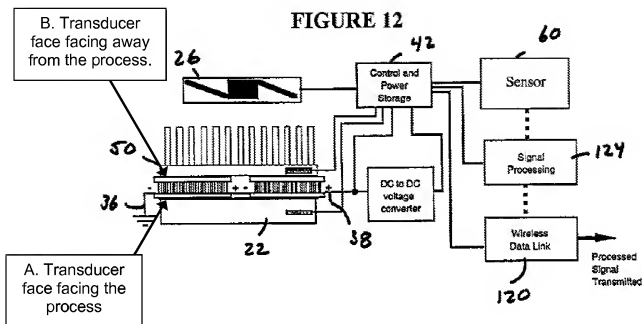


FIGURE 12 of BOCKO et al.

As noted in the figure above, face A of the transducer faces the process while face B of the transducer faces away from the process. All sides other than face A of the transducer are situated facing away from the process. For example, the fan (26), control and power storage (42), sensor (60), signal processing (124) and wireless data link (120) are all situated facing away from the process while the base (22) and face A of the transducer are all situated facing the process.

Regarding the newest limitation of claim 1 requiring the transducer to power the field device, the same structural requirements are provided in reference BOCKO et al as are required by the claim limitations of the instant application. Inherently, since the same structure is present, the same operation is possible. Moreover, the use of the power is irrelevant to the structure of the apparatus itself, as in

claims 1-5, as it is not a structural feature which would carry weight or distinguish BOCKO et al from the instant application structure. Regarding the newest limitation of claim 6 requiring the transducer to power the field device, since the power is generated in the transducer and the transducer is included in the field device, power is supplied to the field device.

Regarding claims 2 and 7, while figure 12 shows a hot and cold side discretely, it is through the design of the module that these sides are determined, not that the structure of the thermoelectric converter prevents a different hot and cold orientation. Therefore, it is inherently possible for the thermoelectric converter to function in either directional heat flow, as the structure for both operations is equivalent.

Regarding claims 3, 4, 8 and 11, BOCKO et al shows, in figure 12, for the fins on side 50 to function as a radiator or heat sink, in paragraph 54. Claim 1 of BOCKO et al also describes all the pieces as being inside the housing.

Regarding claim 5, BOCKO et al teaches power storage and a controller in reference number 42.

Regarding claim 9, BOCKO et al teaches a control and power storage system 42 which minimizes energy consumption (as discussed in the minimized operation

with the fan in paragraph 63) in the controller. Furthermore, the power system is shown to be connected to the wireless interface in figure 12.

Regarding claim 10, BOCKO et al teaches a control and power storage system 42 which minimizes energy consumption (as discussed in the minimized operation with the fan in paragraph 63) in the controller. Furthermore, the rate of power change (and in turn the rate of temperature change) is monitored by the controller or central control.

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
11. Claims 3-5 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over ABB et al (DE 201 07 112 U1), in view of BOCKO et al (US PG PUB 2002/0145538).

ABB et al teaches all the limitations of claims 1, 2, 6 and 7 but is not explicit in the description of the thermoelectric or the layout of the field device.

Regarding claims 3, 4, 8 and 11, BOCKO et al shows, in figure 12, for the fins on side 50 to function as a radiator or heat sink, in paragraph 54. Claim 1 of BOCKO et al also describes all the pieces as being inside the housing.

Regarding claim 5, BOCKO et al teaches power storage and a controller in reference number 42.

Regarding claim 9, BOCKO et al teaches a control and power storage system 42 which minimizes energy consumption (as discussed in the minimized operation with the fan in paragraph 63) in the controller. Furthermore, the power system is shown to be connected to the wireless interface in figure 12.

Regarding claim 10, BOCKO et al teaches a control and power storage system 42 which minimizes energy consumption (as discussed in the minimized operation with the fan in paragraph 63) in the controller. Furthermore, the rate of power change (and in turn the rate of temperature change) is monitored by the controller or central control.

At the time of the invention, it would have been obvious to utilize the known characteristics of the thermoelectric, the heat sink and the control system of BOCKO et al for the ambiguous characteristics of ABB et al because the same pieces are present in both systems therefore the substitution of the standard known elements of BOCKO et al would produce the same known result as in ABB et al. The elements of BOCKO et al are generic and generally known in the art therefore it would be obvious for those same elements of BOCKO et al to share similar features.

Response to Arguments

12. Applicant's arguments with respect to claims 1 and 6 requiring the "supplying electrical power to the field device" have been considered but are moot in view of the new ground(s) of rejection.

13. Since the same references are utilized again in the rejection, the arguments will be responded to below in the interest of compact prosecution.

14. Applicant argues on page 9 following the recitation of an extensive citation of present specification's analysis of the ABB et al reference that it fails to teach the limitations of claim 1 including a thermoelectric transducer arranged in or on a field device outside a pipeline carrying process media being monitored for supplying electrical power to the field device.

a. The citation of the analysis of ABB et al does not teach that the pieces don't exist. This citation is utilized in the art to show the direction and motivation (i.e. the background) behind the invention, not that it doesn't function or doesn't have the same pieces. The citation in the arguments teaches the second sensing point at least to be within the field device, outside the pipeline. There is no requirement in the claim for the monitoring of the process media. Finally, the new limitation added in the amendment (for supplying electrical power to the field device) is addressed in the above rejection. Moreover, the next citation provided at the bottom of page 10 to the top of page 11 teaches the application of the power to the field device is already well established in the art, making it clear that the applied references would function as described inherently. It is unclear what

exactly the citation is used to teach as the arguments simply allege it is patentably distinct. It is unclear outside of a citation of the claim what the applicant alleges isn't taught by ABB et al, as clearly the examiner believes the pieces to be present. It isn't clear if the applicant is alleging ABB et al doesn't teach the arrangement of the transducer or its supply of electrical power to the field device.

15. Applicant then argues starting at the bottom of page 9 to the top of page 11 that BOCKO et al also fails to teach the invention, either alone or in combination with ABB et al.

b. Applicant argues at the top of page 10 for BOCKO et al to not contain a pipeline.

i. While it isn't pipeline in the traditional sense as far as a method of moving petroleum (while neither is that of the instant application), the broadest reasonable interpretation of the word "pipeline" includes a system through which something is conducted or a means of supply (American Heritage dictionary). Base 22 is stated in column 6, lines 22-30 to supply the hot side or in other words to house the process media. The base will function as a supply of heat through the process media inside.

16. Applicant argues on page 11 that neither ABB et al nor BOCKO et al teach provide a "reason for replacing a thermocouple which projects through the wall of a pipeline carrying a process medium of a technical process with a thermoelectric transducer arranged in or on a field device and presently claimed".

- c. It isn't required of BOCKO et al in the rejection featuring a combination of ABB et al and BOCKO et al to teach the thermoelectric transducer arranged in or on a field device, as BOCKO et al when utilized with ABB et al is not utilized for this teaching. Furthermore, see the above argument regarding the alleged lack of a pipeline within the reference of BOCKO et al. There is no reason in the combination of ABB et al and BOCKO et al for BOCKO et al to need to teach "a thermoelectric transducer arranged in or on a field device as presently claimed" because this is already disclosed by ABB et al. It is unclear what it is the applicant has truly alleged is missing from ABB et al which is actually claimed language. Any alleged differences are not made clear between what the applicant believes in inferred in the claims and what actually is claimed.
17. Applicant argues on page 11 that claim 6 is allowable.
- d. No argument is provided as to how the two 35 USC 102 rejections do not teach the subject matter of claim 6.

Conclusion

18. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to KOURTNEY R. SALZMAN whose telephone number is (571)270-5117. The examiner can normally be reached on Monday to Thursday 6:30AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Nam X Nguyen/

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Supervisory Patent Examiner, Art Unit 1753

hrs

5/18/2010